

DIABETES

Diabetes is a condition where your body has trouble managing the sugar in your blood. Normally, your body uses a hormone called insulin to help move sugar from your blood into your cells, where it's used for energy. In diabetes, either your body doesn't make enough insulin, or it can't use insulin properly. This leads to high levels of sugar in your blood, which can cause various health problems over time, like heart disease, nerve damage, vision loss, and kidney issues. Managing diabetes often involves a combination of healthy eating, regular exercise, and sometimes medication to keep blood sugar levels in check.

Types of Diabetes

- **Prediabetes:** A condition where your blood sugar levels are higher than normal but not high enough to be classified as diabetes. It's like a warning sign that you might develop type 2 diabetes in the future.
- **Type 1 Diabetes:** Your body makes little to no insulin because the immune system attacks and destroys the cells in your pancreas that produce it.
- **Type 2 Diabetes:** The most common type. Your body can make insulin, but it doesn't use it effectively, leaving too much glucose in your blood.

Causes

- **Type 1 Diabetes:** Caused by genetic and environmental factors. The immune system mistakenly attacks insulin-producing cells. Triggers can include viral infections, certain foods, and antibiotics. It can run in families, but the exact details are unclear.
- **Type 2 Diabetes:** Caused by lifestyle choices and genetics. Lack of physical activity and being overweight increase the risk. It's more common if someone in your family has diabetes.

Symptoms

Common symptoms of high blood sugar include:

- Excessive thirst and hunger
- Frequent urination
- Fatigue
- Blurry vision
- Numbness or tingling in hands or feet
- Slow-healing sores
- Unexplained weight loss

Symptoms can appear suddenly in type 1 diabetes but develop more slowly and mildly in type 2 diabetes.

Diagnosis

Diabetes is diagnosed through blood tests ordered by your doctor, based on your symptoms, lifestyle, and family history:

- **Hemoglobin A1c (HbA1c):** Average blood sugar over the last 3 months. A result of 6.5% or higher indicates diabetes.
- **Fasting Glucose:** Blood sugar tested after at least 8 hours of fasting. A result of 126 mg/dL or higher indicates diabetes.
- **2-Hour Glucose Test:** Blood sugar tested 2 hours after drinking a sugary drink. A result of 200 mg/dL or higher indicates diabetes.
- **Random Blood Sugar:** A result of 200 mg/dL or higher, along with symptoms of high blood sugar, indicates diabetes.

If you don't have symptoms, a repeat test is needed to confirm the diagnosis.

Treatment

Common medications to treat diabetes include:

- **Metformin:** Aids your body to use insulin better to move sugar into cells.
- **Insulin:** Moves sugar into cells for energy.
- **GLP-1 and GIP Agonists (e.g., Tirzepatide):** Weekly injections that decrease appetite and increase insulin release.
- **GLP-1 Agonists (e.g., Semaglutide, Liraglutide, Dulaglutide):** Weekly injections that decrease appetite and increase insulin release.
- **SGLT2 Inhibitors (e.g., Empagliflozin, Dapagliflozin, Canagliflozin):** Help kidneys remove excess sugar through urine.
- **Sulfonylureas (e.g., Glipizide, Glyburide):** Triggers your body to put out more insulin to help move glucose into cells.
- **Thiazolidinediones (e.g., Pioglitazone):** Increase sugar going into cells and decrease the amount of sugar made by the body.
- **DPP-4 Inhibitors (e.g., Sitagliptin, Linagliptin, Saxagliptin, Alogliptin):** Increase insulin release to help move sugar into cells.

Managing diabetes

Managing diabetes involves a combination of healthy diet, exercise, and possibly medication. Regular visits with your healthcare provider are crucial. You should have your HGBA1C (average blood sugar over the last 3 months) checked at least twice a year or more often if your blood sugar is high. You should have your urine checked once a year for protein called microalbumin: creatinine ratio. You should have an eye exam at least once a year. You should have your feet checked by your doctor at your follow up visits and/or see a podiatrist especially if you have problems with your feet. Diabetes impacts how blood pressure and cholesterol are treated to decrease the risk of heart attack and stroke.

Support Groups - [Patient Journey Diabetes - Support Groups | American Association of Clinical Endocrinology](https://www.aace.com/patient-journey/diabetes/support-groups) <https://www.aace.com/patient-journey/diabetes/support-groups>

For additional information, check out: [Diabetes | Type 1 Diabetes | Type 2 Diabetes | MedlinePlus](https://medlineplus.gov/diabetes.html) <https://medlineplus.gov/diabetes.html>; [Patient Education Library | American Diabetes Association](https://professional.diabetes.org/clinical-support/patient-education-library) <https://professional.diabetes.org/clinical-support/patient-education-library>; [All About Diabetes | American Association of Clinical Endocrinology](https://www.aace.com/disease-and-conditions/diabetes) <https://www.aace.com/disease-and-conditions/diabetes>